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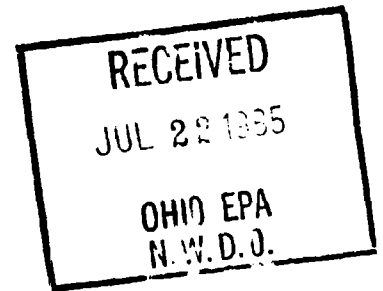
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EPA Region 5 Records Ctr.



379712

July 18, 1985



Mr. Thomas Crepeau
Ohio EPA
P. O. Box 1049
Columbus, Ohio 43216-1049
(Route to Mr. Tom Carlisle)

Re: Closure Plan
Fulton Industries
Wauseon, Ohio
Job No. 39321

Gentlemen:

In accordance with the request of Ohio EPA and USEPA, Fulton Industries has prepared a plan to certify the closure of the waste pile that previously existed at their Wauseon, Ohio facility. As indicated in the plan, the pile was removed from the site in 1982, however, no formal closure documentation was performed at that time. It is the intent of this plan to obtain samples and run analyses to provide this documentation and to provide an engineering certification that the site was closed in accordance with the attached closure plan.

Please review the attached plan and contact Glenn Fitkin or Dick Hoppenjans at Bowser-Morner, Inc. with your comments. Should you desire a meeting to resolve any remaining issues, we would be happy to help you arrange this. Fulton Industries is anxious to accomplish the finalization of the closure.

Please note that it is our opinion that due to the small size of the previous facility, the fact that it has been closed for approximately three years, and the good removal and clean up effort by Fulton Industries in 1982 an extensive exploration and sampling program is not warranted. We feel that the program we have outlined will be sufficient to ensure that a proper evaluation of the site can be made.

BOWSER-MORNER, INC.
Testing Division

BOWSER-MORNER ASSOCIATES, INC.
Engineering Division

Other 420 Davis Ave. • P.O. Box 51 • Dayton, OH 45401 • 513/253-8805
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Mr. Thomas Crepeau
July 18, 1985
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Please contact us with your comments as soon as possible.



Respectfully submitted,

BOWSER-MORNER, INC.

J. Richard Hoppenjans / JRH

J. Richard Hoppenjans, P.E.
Chief District Engineer

Glenn L. Fitkin

Glenn L. Fitkin,
Civil/Environmental Engineer

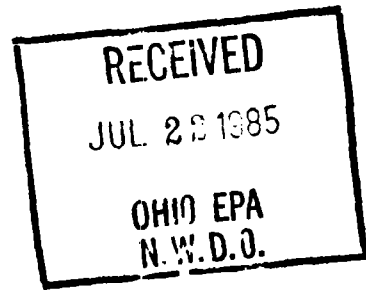
JRH/sav
Attachment

3-Mr. Tom Carlisle
1-Mr. Dave Ferguson-Ohio EPA, Northwest Ohio District
1-Fulton Industries



CLOSURE CERTIFICATION PLAN

FULTON INDUSTRIES
WAUSEON, OHIO
JOB NO. 39321



INTRODUCTION:

Fulton Industries is a metal stamping manufacturer located in Wauseon, Ohio which performs some electroplating. The company generates electroplating waste, which is classified as EPA Hazardous Waste No. F-006. Over a period of about two years between 1980 and 1982, the company accumulated a waste pile of the electroplating waste on their property. In June, 1982 the company had Fondessy Enterprises completely remove the waste pile and a top layer of soil and dispose of it in a hazardous waste landfill.

The company is on file with the USEPA and Ohio EPA as having been a hazardous waste storage facility. The company has never held a storage facility permit, however, the agencies have recently requested that Fulton Industries formally document and certify the closure of the waste pile.

The following closure plan details the steps to be taken to document and certify the closure. The plan has been prepared in substantial accordance with 40CFR 265.111 and 265.112 inasmuch as is possible given that this documentation is to occur after the actual removal of the stored waste material and after termination of the use as a storage facility.

CLOSURE PLAN:

Fulton Industries generates electroplating waste classified as being hazardous waste No. F-006. Over a period of approximately two years, ending



in 1982, the industry accumulated a waste pile of electroplating sludge covering an area approximately 20 feet by 24 feet or a total area of approximately 500 square feet. The maximum volume of the pile and some underlying and surrounding soil which was removed and transported to a hazardous waste facility by Fondessy Enterprises in 1982 was approximately 120 cubic yards. Since then, the industry has not accumulated the waste on-site and has been strictly a generator.

It is assumed, based on our current information and a general knowledge of the area geology, that the waste pile was situated on thick heavy clay soil. This soil, being impermeable and having high attenuation properties, is expected to have prevented the migration of the waste into the soil profile. No near surface aquifer is anticipated to exist. Should conditions differ, some modifications to this plan may be required.

As stated above, all stored wastes were previously removed from the site and disposed in an environmentally sound manner. The industry, at this time, wishes to complete the closure including certification. In order to accomplish this, a field exploration of the storage area will be performed and analysis on recovered soil samples will be performed to allow evaluation of the facility. Two borings, each 15 feet in depth, will be made at random locations within the 20 foot by 24 foot storage area. The borings will be made utilizing a truck mounted drilling rig, using hollow stem augers and employing split spoon and Shelby tube sampling techniques to obtain continuous samples. A sample will be obtained for each 1.5 foot interval beginning at the ground surface and ending at a depth of 15 feet. The samples will be

visually classified in the field and placed in separate containers for transport to the laboratory.

Upon return of the samples to the laboratory, each sample will be visually classified by an engineer or geologist. Three of the interval samples from each of the two borings will be analyzed: a sample from 0.0 to 1.5 feet; a sample from 3.0 to 4.5 feet; and a sample from 13.5 to 15.0 feet. The remaining interval samples will be retained for possible future analysis, if needed. The selected samples will be analyzed for metals, cyanide, and pH. The industry has indicated that they have electroplated with chromium, zinc, and copper. The federal hazardous waste regulations list cadmium, hexavalent chromium, nickel, and cyanide as the basis for listing electroplating wastes (F-006) as hazardous. Fondessy was able to provide EP toxicity results for the waste which are listed in Table 1. As may be seen, cadmium and chromium exceed the limits. Therefore, the metals that will be analyzed for are cadmium, chromium, nickel, zinc, and copper. The metal analyses will be for total concentrations in the soil. The laboratory will be required to maintain a QA/QC program.

Soil testing will be performed on selected samples from the two soil borings. One laboratory permeability and one soil classification will be performed per boring. In addition, several cation exchange capacities (CEC) tests will be performed. This data will be used for an engineering evaluation of the soil at the site.

An engineering evaluation of the facility will be made by a registered professional engineer based upon the geotechnical and analytical data. The



industry shall have the option of reanalyzing the samples to verify the results. If it is judged useful by the engineer, the extra interval samples being retained may be analyzed. If elevated metal contents are found, the degree of risk posed will be evaluated and recommendations made on appropriate action.

The exploration and analytical work will be initiated upon approval of this plan by the Ohio EPA. It is expected that the exploration and analytical work will take approximately 1 to 2 months.

The Ohio EPA Northwest District Office will be notified a minimum of two days prior to the beginning of the soil exploration and sampling work.

Upon successful completion of the closure work, a certification report will be provided by a registered professional engineer stating that the closure was completed in substantial accordance with this closure plan. A plan showing the facility and the boring locations will be included. Analytical results will also be included.

TABLE 1
EP TOXICITY TEST RESULTS

<u>Metal</u>	<u>Waste Concentration (mg/l)</u>	<u>EPA Limit (mg/l)</u>
Arsenic	0.005	5.0
Barium	0.3	100.0
Cadmium	74	1.0
Chromium	24 (hexavalent)	5.0
Lead	0.054	5.0
Mercury	0.0002	0.2
Selenium	0.004	1.0
Silver	0.002	5.0